

IN THE SPECIFICATION

Before Paragraph 1, please delete the following:

**QUICK-ACTION TENSIONING DEVICE FOR
CABLE CONTROL SWITCHES**

Please insert the following new Paragraph 0.5:

CROSS-REFERENCE

[0000.5] This non-provisional application claims benefit of German Application Number 202 09 881.8 filed on June 26, 2002, which disclosure is hereby incorporated by reference herein.

Please replace Paragraphs 1-18 with the following paragraphs:

BACKGROUND AND SUMMARY OF THE INVENTION

[0001] The present invention relates to a quick-action tensioning device for cable control switches, ~~having~~. The tensioning device has a holding element, to which a cable can be fastened in a clamping manner, an ~~having~~ and ~~has~~ a housing, which is connected with the holding element.

[0002] Quick-action tensioning devices for cable control switches exist in which the cable can be fastened between two clamping jaws, a movement of the cable in one direction being permitted as a result of the clamping jaws. Such a quick-action tensioning device is relatively comfortable to mount because the cable is pulled in the desired position and fixed. However, ~~it is disadvantageous that no precision adjustment is provided after an adjusting of the cable.~~ The ~~Such~~ quick-action tensioning devices are usually used in connection with cable control switches which are used in different environments, so that a lengthening or shortening of the cable can take place as a result of thermal influences. If such a change of the cable length cannot also be adjusted ~~for~~ by the quick-action tensioning device, the cable control switch may be triggered too early or too late, which would result in considerable danger.

[0003] ~~It is therefore an object of the present invention to provide a quick-action tensioning device for cable control switches which permits a rougher adjustment as well as a precision adjusting adjustment.~~ The present invention relates to provide a quick-action tensioning device for cable control switches which permits a rougher adjustment as well as a precision ~~adjusting~~ adjustment.

[0004] This object is achieved by means of a quick-action tensioning device having the characteristics of Claim 1. The present invention then is a quick-action tensioning device for cable control switches. The tensioning device includes a holding element to which a cable is fastened in a clamping manner. Also included is a housing connected with the holding element. A first device and a second device are provided between the housing and the holding element for precisely adjusting a distance between the housing and the holding element.

[0005] If Since the quick-action tensioning device has precision adjusting devices between the housing and the holding element, the cable can first be clampingly fixed to the holding element, whereby a rough adjustment can be carried out. Should the cable length change as a result of thermal lengthening or shortening or because of expansion phenomena, a precision adjusting can be carried out, so that. Therefore, the triggering of the cable control switch will may always take place at the a desirable point.

[0006] According to a preferred embodiment of the present invention, a threaded shaft is provided between the housing and the holding element, the. The distance between the housing and the holding element being adjustable by means of a nut. As a result, a continuous adjustment of the cable tension can be carried out, in which case t The nut is preferably constructed as a knurled nut, so that the precision adjusting can take place without any tool.

[0007] A device for detecting the cable tension is preferably provided in the housing. Since usually a certain force has to be overcome for the operation of a switch, the cable should initially also have a certain tension in order to ensure a secure triggering. In this case Accordingly, a display for the cable tension is advantageously provided at the housing, so that the precision adjusting can take place without any additional measuring of the cable tension, because the latter cable tension is shown by means of the display. This is a considerable simplification because even Even small changes of in the length of the cable can be detected.

[0008] For a secure fastening of the cable, the holding element has a plate, so that the cable can be clamped between the plate and a body of the holding element. The cable is preferably deflected between the plate and the body, so that particularly substantially high friction forces occur as a result of the clamping and. The high friction forces can also be absorbed by the quick-action tensioning device for cable control switches.

[0009] ~~In the following, the invention will be explained in detail by means of an embodiment with reference to the attached drawings. The invention will be better understood and appreciated from the following detailed descriptions and with reference to the accompanying drawings.~~

BRIEF DESCRIPTION OF THE DRAWINGS

[00010] Figure 1 is a perspective view of an embodiment of a quick-action tensioning device, according to the principles of the present invention.

[00011] Figure 2 is a perspective view of the quick-action tensioning device of Figure 1 illustrating a during the rough adjustment; and,

[00012] Figure 3 is a perspective view of the quick-action tensioning device of Figure 1 illustrating during the a precise adjustment.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[00013] A quick-action tensioning device 1 ~~comprises~~ includes a holding element 2 for fixing or clamping a cable 3. ~~For this purpose, t~~ The holding element 2 is equipped with includes a plate 4, ~~so that t~~ The cable 3 can be clamped between the plate 4 and a body 17 of the holding element 2 by means of a screw 5. In this case, t The cable 3 is may be guided through a central opening 16 in the holding element 2 and is provided with a deflection 6 is included in the an area of the holding element 2, so that an end section 7 of the cable 3 emerges again from a front side of the holding element 2 by means of an end section 7.

[00014] The quick-action tensioning device 1 also ~~has~~ includes a housing 8 which is connected by way of a threaded shaft 9 with the holding element 2. A knurled nut 10, which may be a knurled nut, is may be mounted on the threaded shaft 9, by way of which. The knurled nut 10 may be used to change a the distance can be changed between the holding element 2 and the housing 8.

[00015] The housing 8 ~~contains~~ may include a device for detecting the cable a tension of the cable 3. The device, such as a may be a spring element (not shown), by means of which the a pretensioning at the threaded shaft 9 can be detected.

[00016] In addition, a display 11 for the cable tension is provided on the housing 8. A stationary marking 12 is arranged in a window at the display 11, ~~b. Behind which the~~ marking 12 a dial 13 can be moved as a function of the cable tension. In ~~the a~~ preferred embodiment, ~~the a~~ desired cable tension ~~is may be~~ indicated by a centering line 13A on the dial 13, so that deviations between the marking 12 and the centering line 13A are easily recognizable.

[00017] For fastening a ~~the~~ cable 3 to the quick-action tensioning device 1, the cable 3 is first pulled through the holding element 2, ~~as shown by the arrows in Figure 2, and~~ is fastened to the holding element 2. ~~For this purpose, t~~The plate 4 is pulled tight by way of an L-shaped hexagon key 14, ~~and the cable 3 being is~~ brought roughly into the a desired position.

[00018] As illustrated in Figure 3, a precision adjusting can take place subsequently. The cable 3 fastened to the holding element 2 ~~will then may be~~ moved relative to the housing 8, by way of a rotation of the knurled screw ~~or, in~~ nut 10. If greater forces have to be expended, ~~by way of a monkey wrench 15, or equivalent tool, which is may be~~ applied to the threaded shaft 9. As a result, the cable tension is changed, which ~~change~~ becomes visible at the display 11 of the housing 8. As soon as the marking 12 and the centering line 13A coincide, the cable 3 has ~~the a~~ desired tension. Should the cable length change because of thermal expansion, a retightening can take place ~~in an~~ effortless manner by a precision adjusting by means ~~adjustment~~ of the knurled nut 10.

Please insert the following new Paragraph 18.5:

[00018.5] Although the present disclosure has been described and illustrated in detail, it is to be clearly understood that this is done by way of illustration and example only and is not to be taken by way of limitation. The spirit and scope of the present disclosure are to be limited only by the terms of the appended claims.